

Elizabeth C. Yoo

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U.S. citizen

EDUCATION

- Princeton University**, Princeton, NJ Sep. 2018–Aug. 2022
Ph.D. Candidate in Operations Research Sep. 2020–Aug. 2022
M.S.E. in Operations Research Sep. 2020
- Research interests: Bayesian optimization and inference, deep learning with applications to healthcare
 - 2020 NSF Graduate Research Fellowship - Honorable Mention
- Columbia University**, New York, NY Sep. 2013–May 2017
B.A. in Mathematics
- 2016 Embassy of Republic of Korea Honor Scholarship
 - Dean's List - all semesters

EXPERIENCE

- **Princeton University: Jha Lab** Princeton, NJ
Graduate Research Assistant Oct. 2021–Present
 - Implemented Deep Neural Network (DNN) models in pytorch that accurately and efficiently diagnose patients with mental disorders using less than 2 hours of physiological data collected from wearable medical devices
 - Extending DNNs for diagnosis to perform differential diagnosis among multiple disorders that share similar symptoms
 - Refactored existing lab research codebase, wrote detailed documentation and re-ran experiments to verify reproducibility of results
- **Princeton University: Engelhardt Lab** Princeton, NJ
Graduate Research Assistant Sep. 2019–Oct. 2021
 - 2019 Schmidt DataX Fund: Proposed and secured a \$125,000 grant for Optimal Experimental Design project for the 2019-2020 academic year
 - Designed and implemented an open-source preprocessing software that analyzes the largest publicly available electronic health records database containing data from over 500,000 hospital admissions and generates uniformly partitioned dataframes for use off-the-shelf in downstream analyses
 - Developed a scalable hierarchical nonparametric model that accurately fits and predicts time-series trajectories of real-time data of over 2000 COVID-19 patients
- **Princeton University** Princeton, NJ
Assistant in Instruction Sep. 2019–Oct. 2021
 - Developed course material for Linear Regression and Time-Series Analysis (Fall '21)
 - Held weekly office hours, led weekly review sessions of course material, served as liaison between students and instructor for Fundamentals of Statistics (Spring '21) and Computing and Optimization (Fall '19)

PUBLICATIONS AND PREPRINTS

- Cui, S., **Yoo, E. C.**, Li, D., Laudanski, K., & Engelhardt, B. E. (2021). Hierarchical Gaussian Processes and Mixtures of Experts in Predicting COVID Patient Trajectories. Accepted to Pacific Symposium on Biocomputing 2022.
- Mandyam, A.* , **Yoo, E. C.*** , Soules, J.* , Laudanski, K., & Engelhardt, B. E. (2021). COP-E-CAT: cleaning and organization pipeline for EHR computational and analytic tasks. In Proceedings of the 12th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (pp. 1-9).
- Demers, M. F.* , Ianzano, C. J.* , Mayer, P.* , Morfe, P.* , & **Yoo, E. C.*** (2017). Limiting distributions for countable state topological Markov chains with holes. *Discrete & Continuous Dynamical Systems*, 37(1), 105.
* denotes equal contribution

LEADERSHIP ACTIVITIES

- Princeton Graduate Women in Science & Engineering Sep. 2018–Oct. 2021
- Women in Operations Research & Financial Engineering, Princeton University: Chair Sep. 2018–Aug. 2020

LANGUAGES

- Python, SQL, R
- Korean (fluent), Japanese (proficient; JLPT N2 certified)